IN THE CLAIMS:

1. (currently amended) A method for estimating altitude, comprising:

generating a drift error model based on repeated measurements at a fixed coordinate location;

determining a time lapse since a last altitude calibration;

obtaining, from ~~a drift~~ said drift error model, an expected error in altitude readings based on the time lapse since the last altitude calibration; and

calculating an estimated altitude based on the expected error.

2. (original) The method of claim 1, wherein said determining a time lapse is performed at turn on.

3. (original) The method of claim 1, wherein said determining a time lapse is performed periodically throughout operation.

4. (original) The method of claim 1, wherein said drift error model is a barometric drift model.

5. (currently amended) The method of claim 1, further comprising generating the drift error model based on empirical studies during which barometric pressure is repeatedly measured at a fixed coordinate ~~location and~~ altitude.

6. (original) The method of claim 1, further comprising storing in the drift error model an acceptable variation between actual altitude and an altitude derived from barometric pressure.

7. (original) The method of claim 1, wherein said drift error model defines a statistical relationship between an anticipated drift in a barometric altimeter reading based upon an amount of time since last calibration.

8. (currently amended) The method of claim 1, further comprising ~~generating said drift error model based on repeated measurements at a fixed coordinate location, where the~~ comparing drift model measurements ~~are compared~~ with one another to determine a range over which barometric pressure varies within predetermined periods of time.

9. (original) The method of claim 1, further comprising storing, in the drift error model, predetermined ranges over which barometric pressure varies within discrete periods of time.

10. (currently amended) A system for estimating altitude, comprising:

an input receiving altitude readings;

a processor determining a time lapse since a last altitude calibration; and

memory storing a drift error model containing an expected error in the altitude readings based on the time lapse since the last altitude calibration, said processor calculating an estimated altitude based on the expected error, wherein said drift error model is generated based on repeated measurements at a fixed coordinate location.

11. (original) The system of claim 10, wherein said processor determines the time lapse when the system is turned on.

12. (original) The system of claim 10, wherein said processor determines the time lapse periodically throughout operation.

13. (original) The system of claim 10, wherein said drift error model is a barometric drift model.

14. (currently amended) The system of claim 10, wherein said drift error model is generated based ~~on empirical studies during which barometric pressure is repeatedly measured~~ repeated measurements at a fixed coordinate ~~location and~~ altitude.

15. (original) The system of claim 10, wherein said drift error model contains an acceptable variation between actual altitude and an altitude derived from barometric pressure.

16. (original) The system of claim 10, wherein said drift error model defines a statistical relationship between an anticipated drift in a barometric altimeter reading based upon an amount of time since last calibration.

17. (currently amended) The system of claim 10, wherein said ~~drift error model is generated based on repeated measurements at a fixed coordinate location, where measurements are compared with one another to determine~~ said processor determines a range over which barometric pressure varies within predetermined periods of time, based on comparing drift error model measurements with one another.

18. (original) The system of claim 10, wherein said memory stores, in said drift error model, predetermined ranges over which barometric pressure varies during within discrete periods of time.